

## CLAIMS

What is claimed is:

1. An error correction method for use with a noisy communication channel, said method comprising the steps of:
  - dividing a data stream into symbols;
  - sampling the divided data stream in threads, wherein samples are taken at fixed
  - 5 time intervals;
  - inserting a correction symbol into the data stream to mix the correction symbol with data symbols that have a fixed time separation;
  - transmitting the data stream;
  - receiving the transmitted data stream;
  - 10 performing error detection and correction computations on the data and error correction symbols; and
  - outputting an error corrected data stream.
2. The method of Claim 1 wherein the bursty communication channel comprises a satellite communication link.
3. The method of Claim 1 wherein the bursty communication channel comprises a scratched compact disk.
4. The method of Claim 1 wherein the incoming data stream comprises symbols in the form of bits.
5. The method of Claim 1 wherein the incoming data stream comprises symbols in the form of bytes.
6. The method of Claim 1 wherein the incoming data stream comprises symbols in the form of words.
7. The method of Claim 1 wherein samples are taken at fixed time intervals that are longer than the time interval of the bursts of data.
8. The method of Claim 1 wherein the step of performing error detection and correction comprises performing cyclic redundancy check error correction.

9. The method of Claim 1 wherein the step of inserting a correction symbol into the data stream comprises the step of inserting the same correction symbol in more than one thread.

10. An error correction method for use with a noisy communication channel, said method comprising the steps of:

- copying each data symbol that is to be transmitted onto a register;
- placing each data symbol onto a transmit output buffer in a predetermined
- 5 position, wherein positions between each data symbol are filled with error correcting symbols calculated after a register gets filled;
- transmitting a symbol transmission stream from the transmit output buffer;
- receiving the transmitted transmission stream;
- placing data and error correction symbols from the symbol transmission stream
- 10 on predetermined registers;
- performing error detection and correction computations on the data and error correction symbols;
- placing the corrected data symbols on a receive output buffer in their correct positions; and
- 15 outputting an error corrected data stream from the receive output buffer.

11. The method of Claim 10 wherein the bursty communication channel comprises a satellite communication link.

12. The method of Claim 10 wherein the bursty communication channel comprises a scratched compact disk.

13. The method of Claim 10 wherein the incoming data stream comprises symbols in the form of bits.

14. The method of Claim 10 wherein the incoming data stream comprises symbols in the form of bytes.

15. The method of Claim 10 wherein the incoming data stream comprises symbols in the form of words.

16. The method of Claim 10 wherein samples are taken at fixed time intervals that are longer than the time interval of the bursts of data.

